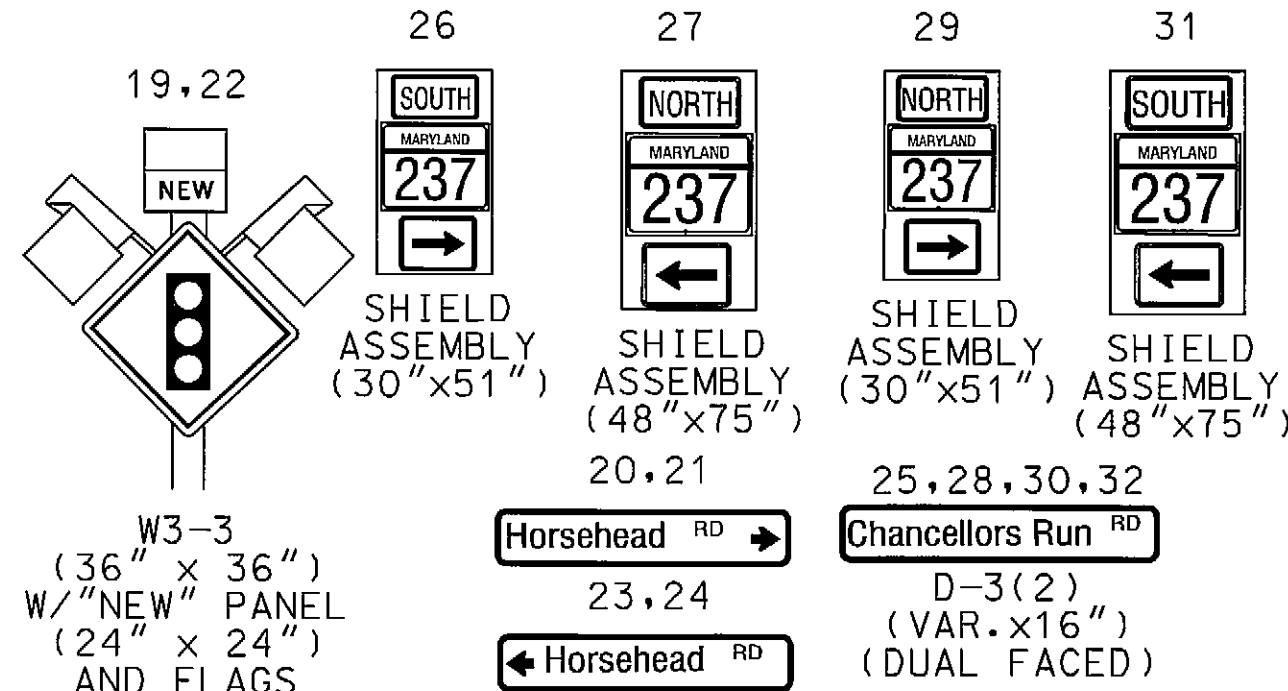
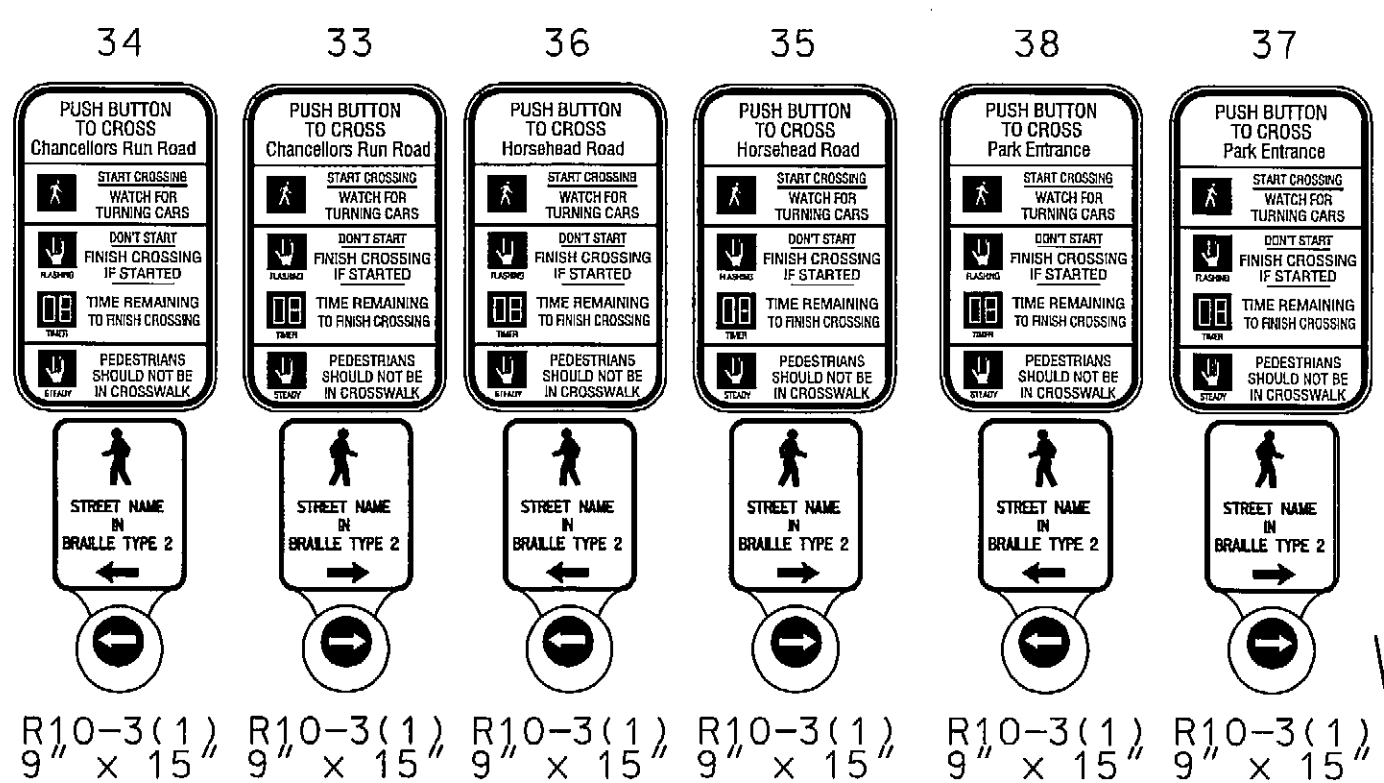




MD 237 IS ASSUMED TO RUN  
IN A NORTH-SOUTH DIRECTION



PROPOSED SIGNS

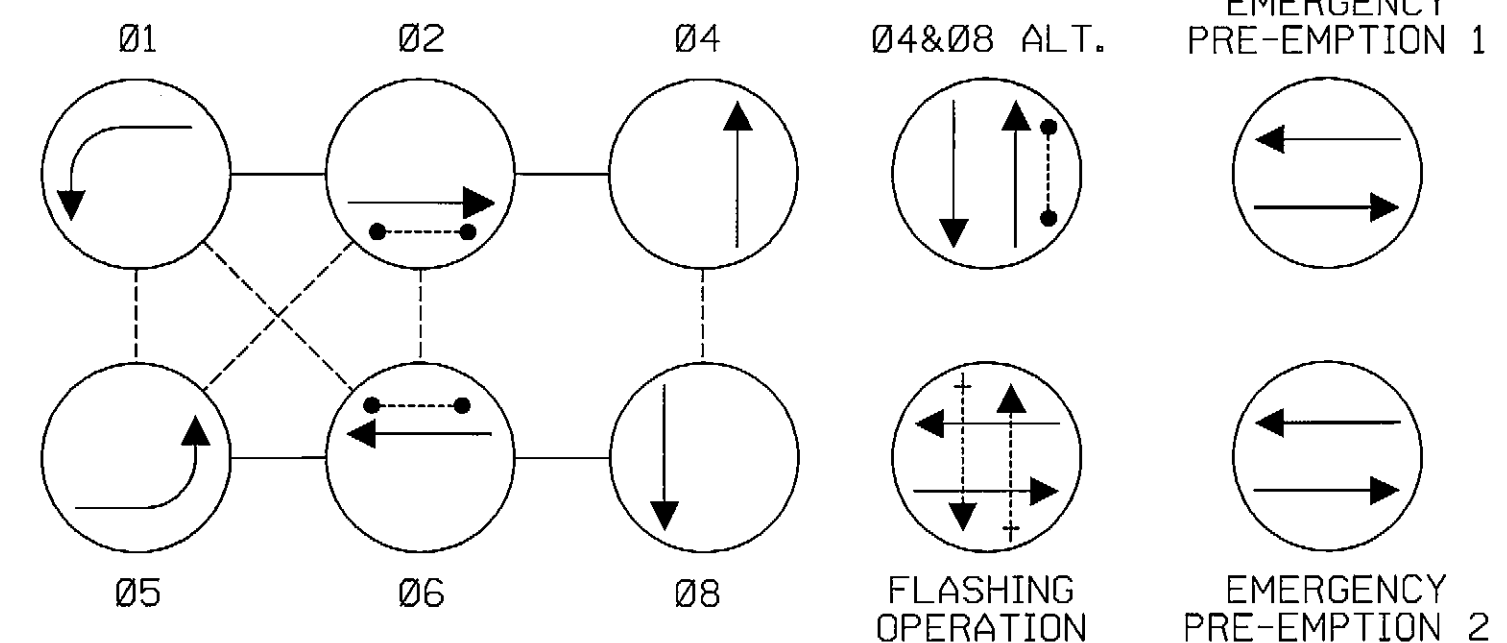


PROPOSED SIGNALS

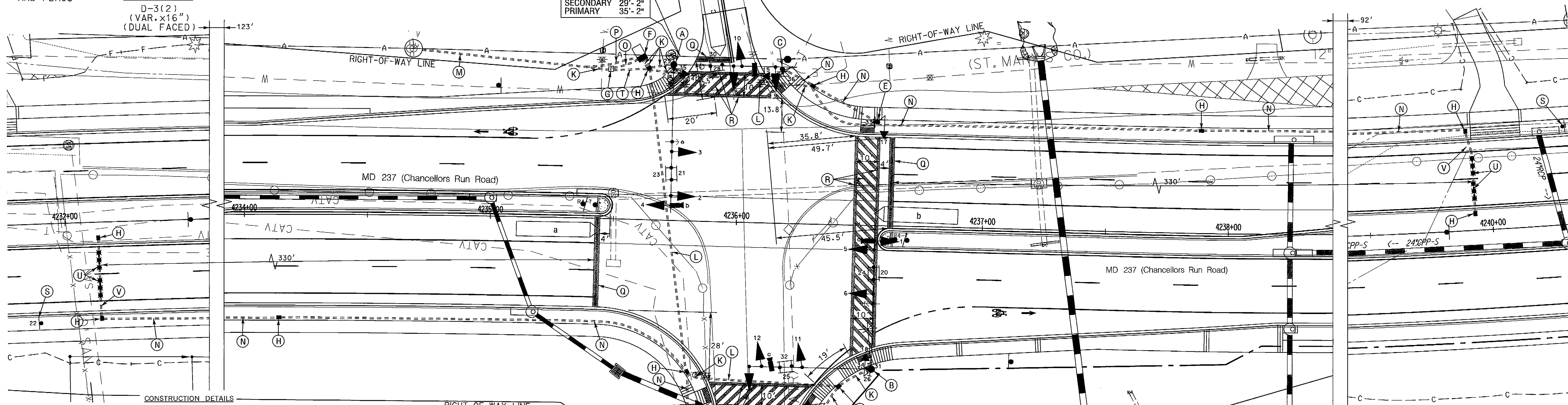
PROPOSED OPTICOM  
DETECTOR EYE

PROPOSED VIDEO  
DETECTION

NEMA PHASING



NOTE:  
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.  
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.



- CONSTRUCTION DETAILS**
- INSTALL CONCRETE FOUNDATION WITH A 27 FT. (CUT TO 21 FT.) STEEL POLE WITH A TWIN 60 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, OPTICOM DETECTOR EYE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HORSEHEAD ROAD") AND VIDEO DETECTION CAMERA MOUNTED ON MAST ARM. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
  - INSTALL CONCRETE FOUNDATION WITH A 27 FT. STEEL POLE WITH A TWIN 60 FT. / 50 FT. MAST ARM, TRAFFIC SIGNAL HEADS, SIGNS, OPTICOM DETECTOR EYE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS CHANCELLORS RUN ROAD"). VIDEO DETECTION CAMERA MOUNTED ON MAST ARM AND 15 FT. STREET LIGHTING ARM WITH A 250 WATT HIGH PRESSURE SODIUM VAPOR LUMINAIRE. (INSTALL 1-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN POLE BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS HORSEHEAD ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS PARK ENTRANCE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS CHANCELLORS RUN ROAD"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
  - INSTALL NEMA SIZE "6" BASE MOUNTED CABINET AND CONTROLLER WITH CONCRETE PAD (INSTALL 2-2 IN. AND 2-4 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BENDS IN CABINET BASE).
  - INSTALL EMBEDDED METERED SERVICE PEDESTAL WITH 2-2 IN. AND 1-4 IN. SCHEDULE 80, 90 DEGREE PVC CONDUIT BENDS IN PEDESTAL BASE.
  - INSTALL HANDHOLE.
  - INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS PARK ENTRANCE"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).

- SPECIAL NOTES:**
- CONTRACTOR SHALL USE CAUTION WHEN INSTALLING SIGNAL EQUIPMENT TO AVOID DISTURBANCE OF EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL TEST PIT TO DETERMINE EXACT LOCATION AND DEPTH OF UNDERGROUND UTILITIES PRIOR TO INSTALLING SIGNAL EQUIPMENT.
  - INSTALL HANDHOLE WITH LONG DIMENSION PERPENDICULAR TO TRAVEL WAY FOR INSTALLATION OF NON-INVASIVE PROBES. EXTEND CONDUIT A MINIMUM OF 2 IN. AND MAXIMUM OF 3 IN. INTO HANDHOLE.

CONSTRUCTION DETAILS CONTINUED

- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
- INSTALL 4 IN. SCHEDULE 80, POLYVINYL CHLORIDE ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE AND 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT FOR PROPOSED UNDERGROUND TELEPHONE SERVICE IN COMMON TRENCH. CAP AND MARK CONDUITS 2 FT. ABOVE GRADE AT UTILITY POLE FOR USE BY OTHERS.
- INSTALL 3 IN. SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND ELECTRICAL SERVICE.
- INSTALL 2 IN. SCHEDULE 80, PVC ELECTRICAL CONDUIT - TRENCHED FOR PROPOSED UNDERGROUND TELEPHONE SERVICE.
- INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
- INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
- INSTALL W3-3 "SIGNAL AHEAD" SIGN (36 IN. x 36 IN.) WITH "NEW" PANEL AND FLAGS ON ONE 4 IN. x 6 IN. TREATED WOOD POST APPROXIMATELY 625 FT. IN ADVANCE OF THE INTERSECTION ON NORTHBOUND AND SOUTHBOUND MD 237.
- INSTALL 2 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
- INSTALL NON-INVASIVE MICROLOOP PROBE SET WITH 1,000 FT. LEAD-IN IN PROPOSED 3 IN. CONDUIT.
- INSTALL 3 IN. SCHEDULE 80 ELECTRICAL CONDUIT - BORED.

GENERAL NOTES

- ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS. TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
- THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
- VIDEO CAMERA LOCATION / ALIGNING SHALL BE COORDINATED WITH THE SHA ENGINEER.
- THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE AND CABINET LOCATIONS PRIOR TO INSTALLATION.
- ALL PROPOSED LUMINAIRES SHALL BE SUPPLIED WITH A PHOTOCELL.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLES TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
- PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" x 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
- THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
- PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
- LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP PUBLICATION, "ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE". IF NOT MET, THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL A DESIGN WAIVER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
- FOR FINAL PAVEMENT MARKINGS REFER TO THE PAVEMENT MARKING PLANS, OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH MSHA STANDARDS.

GENERAL NOTES CONT.

- INSTALL CONDUIT PRIOR TO THE INSTALLATION OF PAVEMENT MARKINGS. REFER TO SIGNING AND PAVEMENT MARKING PLANS FOR ADDITIONAL DETAILS.
- VERIFY PROPOSED GEOMETRICS PRIOR TO INSTALLING SIGNAL EQUIPMENT.
- ALL HANDHOLES SHALL BE INSTALLED AT FINAL GRADE.
- REFER TO SHEET 2 FOR DIMENSIONS OF SIGNAL EQUIPMENT AND PAVEMENT MARKINGS WITHIN INTERSECTION.

**WR&A**  
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Engineers, Architects and Planners  
801 South Caroline Street  
Baltimore, Maryland 21201  
410-233-3450

**UTILITY LEGEND**

SD	SD	STORM DRAIN
G	G	GAS MAIN
W	W	WATER MAIN
S	S	SEWER MAIN
E	E	ELECTRIC CABLES
A	A	AERIAL CABLES
T	T	TELEPHONE CABLES
F	F	FIBER-OPTIC

**APPROVALS**

TEAM LEADER	
ASST. DIV. CHIEF	
DIVISION CHIEF	
OFFICE DIRECTOR	

**REVISIONS**

NO.	DESCRIPTION	DATE
1	GREENLINE REVISION NO. 1 CUT SIGNAL POLE TO 21 FT. DUE TO UTILITY CONFLICT 5/1/2009	5/1/2009

**SHA**  
STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION  
OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION  
MD 237 AND CHANCELLOR'S RUN PARK ENTRANCE/HORSEHEAD ROAD

**TRAFFIC SIGNALIZATION PLAN**

SCALE 1" = 20' ADVERTISED DATE OCTOBER 6, 2008 CONTRACT NO. SM757571

DESIGNED BY B. DONOWAY COUNTY ST. MARYS  
DRAWN BY B. DONOWAY LOGMILE 18023701.33  
CHECKED BY N. LEARY TMS NO. H783  
F.A.P. NO. SEE TITLE SHEET TOD NO.

TS NO. 4657 DRAWING TSP- 1 OF 3 SHEET NO. 2 OF 8